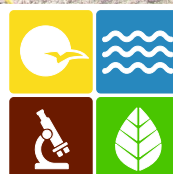


FUSRAP

FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM OVERSITE AND MONITORING COOPERATIVE AGREEMENT

4th Quarter: October through December 2014 Report



MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

Missouri Department of Natural Resources

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COVER PHOTO: Excavation of contaminated soil continues at the St. Louis Downtown Site Mallinckrodt Plant 6 West Half. This area was under active remediation just east of the SLDS loadout.

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VP57/58 work continued in North County, southwest of the Coldwater Creek crossing at Pershall Road.

History of the Formerly Utilized Sites Remedial Action Program Sites

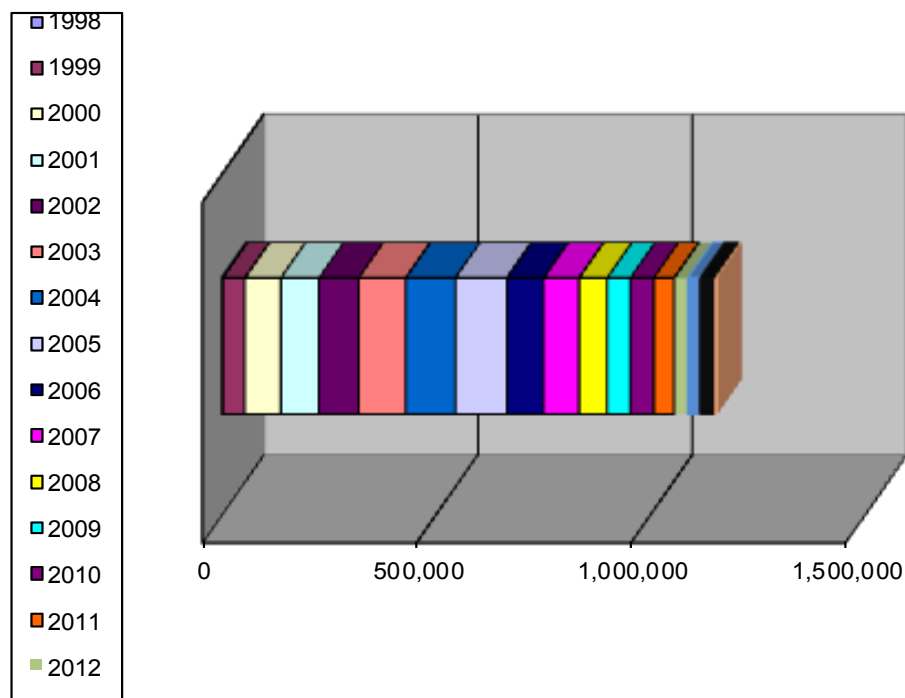
The St. Louis Downtown Site (SLDS) processed uranium for the nation's early atomic energy program. In 1946, the U.S. Department of Energy's (DOE) predecessor agencies began utilizing the St. Louis Airport Site (SLAPS) as a storage area for radioactive wastes and processed residues, the majority of which originated at the SLDS. Methods of storage at the SLAPS included both uncovered bulk storage piles and materials containerized in drums. In 1966 the materials at the SLAPS were sold by the Atomic Energy Commission (AEC) and were shipped to a facility at 9200 Latty Avenue (Futura), where the majority of the material was dried and shipped to out-of-state processing facilities. 8,700 tons of radioactively contaminated barium sulfate processed waste were mixed with 39,000 tons of soil and disposed of at West Lake Landfill in 1973. (West Lake Landfill is being addressed separately from the FUSRAP.)

Processing, transportation, storage, and management practices during the above-stated period led to the contamination of the three major FUSRAP sites: SLDS, SLAPS, and the Hazelwood Interim Storage Site (HISS)/Futura, with the latter two sites being placed on the National Priorities List (NPL) in 1989. In addition, approximately 78 contaminated vicinity properties have been identified as SLAPS Vicinity Properties (VPs).

On October 13, 1997, the Energy & Water Appropriations Bill transferred the responsibility for the remediation of FUSRAP properties from the DOE to the U. S. Army Corps of Engineers (USACE). The total volumes of contaminated soils, sediments and debris at St. Louis FUSRAP sites were estimated to have been about 1.1 million cubic yards. USACE has already excavated more soil than had been originally estimated.

Status of Work Completed This Quarter

MAJOR AREA	SPECIFIC SITES	WORK DESCRIPTION
North County (NC)	SLAPS Vicinity Properties	Pershall Avenue Right of Way sampling and Coldwater Creek Vicinity Property from Frost Ave. to St. Denis sampling continued during the quarter. Sampling and remediation of portions of VP57 and VP58 continued during the quarter. The volume of soil removed from the vicinity properties this quarter was about 1,245 yd ³ .
North County (NC)	HISS/Futura and Latty Ave. Vicinity Properties	Most remediation work has been completed on these properties, although final documentation of this status has not yet been completed. No soil or debris was shipped from these properties during the quarter.
Saint Louis Downtown Sites (SLDS)	Saint Louis Downtown Site and Vicinity Properties	Building 101 excavation at Plant 6 West Half continued during the quarter. Utility supports of Mallinckrodt excavations within the plant 7W/700 Pad area were completed. City Property (DT-2) Area 8 restoration was completed. Accessible areas of expanded Kiesel Hall Street work was completed. The volume of soil removed from St. Louis Downtown Sites in this quarter was about 8,379 yd ³ .
NON-SITE SPECIFIC		Ten utility support operations were undertaken by the USACE during the quarter. The total volume of soil and debris removed this quarter for the entire St. Louis FUSRAP project was about 9,624 yd ³ . (For reference, during Federal Fiscal Year 2014 about 30,740 yd ³ of material was removed from all St. Louis FUSRAP project sites.)



Cubic Yards Excavated and Removed

Years and quarters on this chart are based on the Federal Fiscal Year (FFY). For example, FFY 2015 is October 1, 2014, through September 30, 2015.

Work Performed by Department Personnel

DOCUMENT REVIEWS

The Missouri Department of Natural Resources' Federal Facilities Section (FFS) provides technical review on major decision documents, work plans, pre-design investigation reports, remedial designs, and post remedial action reports.

Comments are submitted to the USACE for response and become part of the public record. Listed below are both documents reviewed by the Department during this quarter and documents previously reviewed for which some resolution of comments occurred or is pending.

1. ***“Record of Decision for the Inaccessible Soil Operable Unit Associated with Group 1 Properties at the St. Louis Downtown Sites,” Final, dated September 29, 2014.***

USACE provided a response to USEPA and DNR comments in this final Record of Decision.

2. ***“Post-Remedial Action Report / Final Status Survey Evaluation for the Latty Avenue Vicinity Property Futura,” Revision B, dated June 27, 2014.***

The Department requested clarification on inaccessible contamination left in place at utility poles. We requested USACE document sewer and video inspection equipment inspections or provide a reference, asked for further explanatory text, and requested correction of minor calculation discrepancies. DHSS asked for responses to technical questions regarding the RESRAD runs in a supplemental request to USACE transmitted on December 2, 2014.

DOCUMENT REVIEWS (CONTINUED)

3. *“Community Involvement Plan for the St. Louis FUSRAP Sites,” Revision B, dated August 28, 2014*

The Department provided input from a community involvement specialist for consideration in a revision of the document. We asked USACE to consider enhanced community notifications and other measures whenever contamination is found above RGs in a new area that may result in public exposure. We also requested sample utility and property owner and utilities outreach letters and that a schedule for their update appear in the plan.

4. *“Addendum to the Post-Remedial Action Report and Final Status Survey Evaluation for the Latty Avenue Vicinity Properties 01(L) and Parcel 10K530087 (Including Parcels 10K530065 and 10 K530076)” Revision B, dated August 15, 2014.*

The Department requested clarification regarding equipment calibration records and record retention. The department asked for clarification regarding statements about how isotopic activity fraction is calculated. We asked for a reference for the method used to calculate a special sum of ratios in the document. DHSS had technical questions about RESRAD runs performed and non-default input parameters used in modeling risk and dose.

5. *“Institutional Controls Implementation Plan for the North St. Louis County Sites” Revision B, dated August 18, 2014.*

The Department asked for figures mapping the known areas where institutional controls would need to be applied. We asked for a figure showing inaccessible contamination areas in the record of decision. The Department requested USACE consider items in various USDOE guidance on institutional controls implementation plans. We asked USACE to consider what happens when inaccessible contamination becomes accessible in the plan, and for more information in the plan on how controls would be maintained during and after the transition of the project to long term management under United States Department of Energy (USDOE). We asked for an inspection and notification schedule for affected properties. We asked that the document include a clause allowing USDOE to modify the plan when it becomes their responsibility to implement it.

6. *“Post Remedial Action Report and Final Status Survey Evaluation for the St. Louis Site Vicinity Property Banshee Road,” Revision B, dated November 20, 2014.*

The Department is currently reviewing the document.

7. *“Post Remedial Action Report and Final Status Evaluation for the Accessible Soil Within the SLDS Vicinity Property Terminal Railroad Association (DT-9),” Revision B, dated December 15, 2014*

The Department is currently reviewing the document.

8. *“Third Five year Review Report for the FUSRAP St. Louis Sites,” Revision B, dated December 5, 2014.*

The Department is currently reviewing the document.

DOCUMENT REVIEWS (CONTINUED)

11. *“Remedial Design / Remedial Action Work Description for FUSRAP North St. Louis County Sites,” Revision B, dated September 29, 2014.*

The Department is currently reviewing the draft work plan.

12. *“Post Remedial Action Report and Final Status Evaluation for the St. Louis Site Vicinity Property Banshee Road” Revision B, dated November 20, 2014.*

The Department is currently reviewing the draft report.

13. *“Pre-Design Investigation Report and Final Status Survey Evaluation for Byassee Drive and Adjacent Properties” Revision B, dated November 14, 2014.*

The Department is currently reviewing the draft report.

14. *“FUSRAP Site Wide Remediation of Co-mingled Arsenic,” Revision 0, dated December 16, 2014.*

The Department is currently reviewing the final position paper.

SITE OBSERVATIONS

Field personnel conduct site visits to observe and document the status of remedial actions, environmental monitoring, contaminant migration prevention and pre-design investigations. USACE personnel are immediately notified of findings, and reports are filed for public record.

The following site visits were conducted on these dates during this quarter:

SPECIFIC SITES	OCTOBER	NOVEMBER	DECEMBER
North County Sites (HISS/Futura, SLAPS, and Vicinity Properties)	7, 8, 15	5, 13, 18, 24, 25	2, 10, 16
SLDS	15	18	3

SAMPLING

Samples are obtained by Department personnel and shipped to a contract laboratory for analysis. The purposes of sample collection include confirmation of results from remedial actions, storm water controls/treatment, and investigating locations of potential concern.

U.S. Army Corps of Engineers Coldwater Creek Bi-Annual Sampling

The Department observed bi-annual Coldwater Creek sampling on October 7, November 25, and December 10. We obtained splits of water and sediment samples from stations C007, C008, and C009. C008 and C009 are new stations within the USACE Coldwater creek monitoring program. These samples have been analyzed, and our results are available upon request. We also observed the 4th quarter groundwater monitoring on December 10. We obtained split samples from monitoring wells B53-W18S and B53-W13S. These samples have also been analyzed, and our results are available upon request.

COMMUNITY RELATIONS

Department personnel are available for questions, requests for information, or as a means of submitting comments and concerns. It is our goal to encourage community involvement and ensure that the concerns of the citizens of Missouri are addressed. Special requests regarding field oversight, research and presentations are welcome. Contact the Federal Facilities Section at (573) 751-3907 for assistance.

OVERSIGHT COMMITTEE

The St. Louis Oversight Committee meets periodically to get updates on current remediation work, discuss the history of the sites, and to be briefed on USACE future plans and provide community feedback to USACE. The St. Louis Oversight Committee last held a public briefing meeting on January 14, 2014. USACE's project managers gave update presentations on the current remediation work; USACE also presented maps showing historic sampling of Coldwater Creek and fielded questions on their future work plans. The committee plans to hold another public briefing meeting 7-9 pm on January 29, 2015 at Hazelwood Civic Center East (8969 Dunn Road, Hazelwood, MO); a similar agenda to this is planned. The St. Louis Oversight Committee sets their own meeting times and agendas; a current contact for the group is Carl Chappell at (Cfchappell@sbcglobal.net).

REGULATORS COORDINATION MEETINGS

Personnel from the EPA, the USACE, and the Department periodically meet in person and by conference call to discuss site status, document schedules, landowner assistance projects and other similar issues. These coordination meetings are beneficial, as they keep the parties informed of site status, allow for discussion of cleanup issues, and provide coordination of agency activities as they relate to cleanup of the sites. Meetings were held on October 8, October 29, and November 19 during this quarter.

USACE REMEDIAL ACTIONS

NORTH COUNTY

- Characterization sampling of Pershall Rd. was on hold during the quarter.
- Characterization sampling of Coldwater Creek between Frost Ave. and St. Denis bridge continued.
- VP 57/58 characterization sampling and remediation continued during the quarter.

ST. LOUIS DOWNTOWN SITE

- Plant 6 (Mallinckrodt) excavation of soils underlying building 101 continued during the quarter.
- Excavation and additional sampling close to the Kiesel Hall Street property was completed.
- Restoration of DT-2 City Property east of the levee was finished during the quarter.



Railcars were being made ready for shipment at St. Louis Downtown Site load out pad area on December 3. When the railcars are full, the plastic lids seen center right are used to keep precipitation from contacting contaminated materials during transport.

Tasks and Goals for Next Quarter

NORTH COUNTY

- USACE characterization sampling of Coldwater Creek between Frost Ave. and St. Denis bridge may continue.
- Pershall Road characterization sampling may be completed. Banshee Rd. additional verification sampling may begin.
- USACE may begin remediation North of McDonnell Blvd adjacent to Coldwater Creek.
- USACE will continue to remediate at VP57/VP58 west of Coldwater Creek and South of Pershall Rd.

ST. LOUIS DOWNTOWN SITE

- USACE remediation of DT-2 (City Property) may continue. This work is currently expected to be completed in mid-2016.
- USACE Plant 6/building 101 area soil excavation will continue. This work is currently expected to be completed mid-2015.
- Support of utility excavation activities at the St. Louis Downtown Sites will continue.
- Additional sampling locations for a remedial investigation addendum may be identified.

DOCUMENT REVIEWS

Review of the following documents and data are potentially anticipated during the next quarter.

NORTH COUNTY

- IA-9 Ballfields Phase 2
- VP40A PDI Report
- McDonnell Blvd PDI Report
- Final North County Remedial Design/Remedial Action Work Description
- Final North County Institutional Controls Plan
- Final FUSRAP Community Involvement Plan

ST. LOUIS DOWNTOWN SITE

- Final for Kiesel Hall Street
- Kiesel Hall Street Property Post Remedial Action Report
- Explanation of Significant Difference for SLDS

SITE OBSERVATIONS AND SAMPLING

Our on-going role in providing site observations and sampling investigations will continue as per previous quarters.

DEPARTMENT PROJECTS

Staff will continue to work on committees affiliated with long-term stewardship (also known as LTS), Groundwater, and the 5-year review.

LONG-TERM STEWARDSHIP

Long-term stewardship applies to sites and properties where long-term management of contaminated environmental media is necessary to protect human health and the environment over time. This generally includes the establishment and maintenance of physical and legal controls, implementation entities, authorities, accountability mechanisms, information and data management systems, and other resources. The need for long-term stewardship will exist for areas of inaccessible contamination at both the North St. Louis County and Downtown Properties located under roads, railroads, buildings and other similar structures deemed by the current owners to be vital or in-use. It also exists for portions of the downtown site for which Remediation Goals are deemed suitable for industrial uses. Completion of the project is expected by 2017, and this will be followed by a two-year transitional period to transfer responsibility from the USACE to the U.S. Department of Energy. The department wants these mechanisms to be identified and in place prior to the transition so their effectiveness can be assessed prior to the transition. Regional U.S. Department of Energy—Legacy Management personnel met with the Missouri Department of Natural Resources on September 18 to discuss these issues, and USACE assisted by giving them a site familiarization tour of the St. Louis Downtown Sites and the VP57/58 active remediation work in North County.

Financial Reporting

The Department's Hazardous Waste Program submits a financial report separate from this document. The report includes costs incurred during the reporting period with request for reimbursement forms.

Status of Work Completed This Quarter

* USACE Cooperative Agreement funds were not used for all of the staff listed as participating in this training, conference, or meeting;

** USACE Cooperative Agreement funds were used for a percentage of this training.

TRAINING, CONFERENCE OR MEETING	DATES	DEPARTMENTAL STAFF
Hazardous Waste Program, Federal Facilities Section Meeting	10/28, 12/17	Carey, Alexander, Anderson, Drake, Doster, Gilstrap *
Missouri Geological Services Training	10/28	Carey, Alexander, Gilstrap, Anderson, Drake, Doster (*,**)
SLDS Status Meetings	12/3	Carey
MDNR USACE Cooperative Agreement Meeting	11/3	Carey, Drake
Lab Services RFP Meeting	12/9	Carey, Alexander
Oversight Committee Historical Briefing	11/18	Carey
Regulator Conference Calls	10/8, 10/29, 11/19	Carey, Drake, Anderson